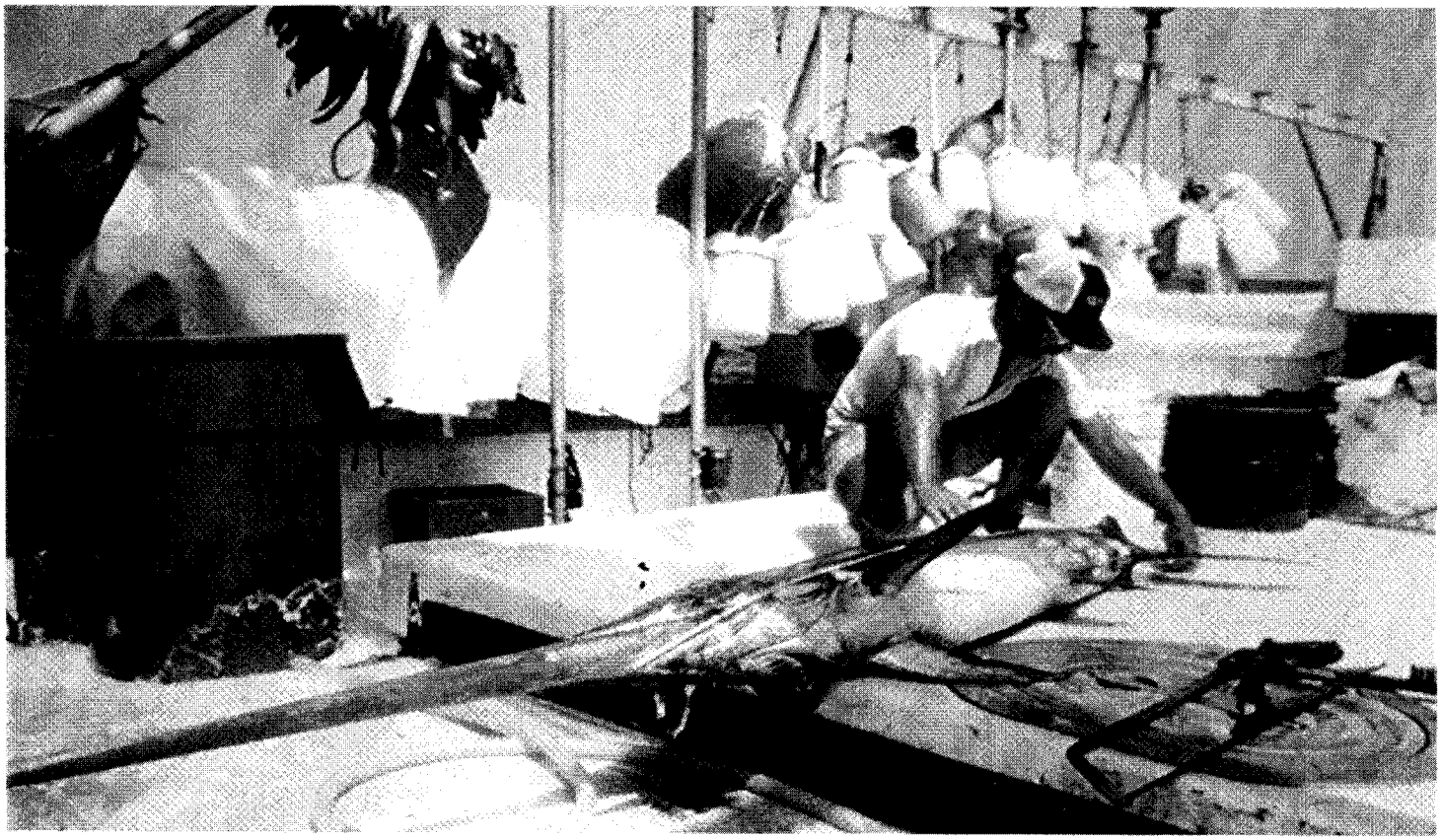
NOAA Technical Memorandum
NMFS-SEFSC-496

2001

ANNUAL SUMMARY

LARGE PELAGIC SPECIES

ANDY BERTOLINO, JEAN CRAMER, AND AMY L. PAINE



U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Science Center
75 Virginia Beach Drive
Miami, Florida 33149

March 2003

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by

Andy Bertolino
Jean Cramer
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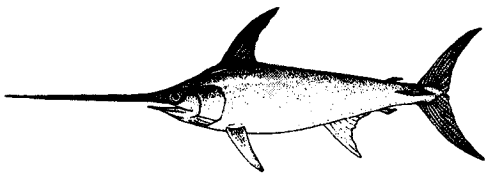

U.S. DEPARTMENT OF COMMERCE
Donald L. Evans, Secretary

National Oceanic and Atmospheric Administration
Conrad C. Lautenbacher, Jr., Under Secretary For Oceans and Atmosphere

National Marine Fisheries Service
William T. Hogarth, Assistant Administrator for Fisheries

March 2003

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This is the twelfth annual summary of large pelagic species. The primary purpose of this report is to summarize data and activities related to the mandatory large pelagics logbook and observer programs. This summary serves as a vehicle for dissemination of information to those directly involved in the fishery. In addition to updating catch, effort, catch per unit effort (CPUE), and location information, and detailing revisions to logbook reporting in 2003, this year's report includes sections pertaining to swordfish, yellowfin, bigeye and albacore stock status, bycatch, time area closures, mandatory dealer reporting, the longline observer program, and other related studies.

Comments and suggestions are invited; see section labeled "CONTACT INFORMATION."

COMPARISON OF 1999 - 2001 LOGBOOK CATCH AND EFFORT DATA

Four summary tables are included in this newsletter. The numbers of swordfish, tunas, and billfish reportedly caught by area for 1999, 2000 and 2001 (preliminary) are given for longline (Tables 1a-1c). Longline effort is reported in hooks and numbers of boats. The longline vessel statistics are from logbook reports that were considered to represent all pelagic longline sets including summary records; bottom longline records were excluded.

Between 2000 and 2001, reported longline effort (hooks set) decreased in the FEC and NED by 34% and 42% respectively due to time/area closures. Some redistribution of effort into the MAB and NEC is suggested by increases in effort in these areas of 10% and 36% respectively.

Total reported longline effort for 2001 was lower than reported for 2000. The total number of longline vessels decreased in 2001 from the previously reported numbers in 1999 and 2000.

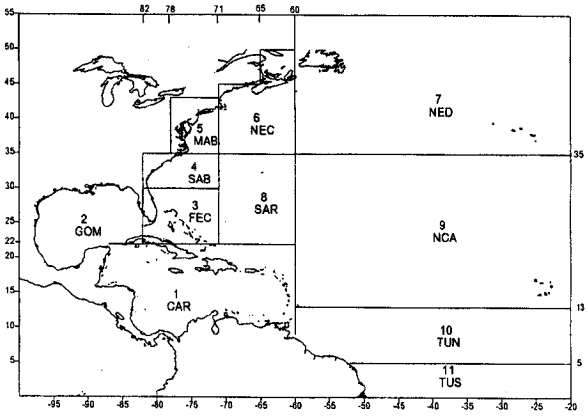

Figure 1. Map designating the eleven areas used in analysis of the swordfish logbook data. Locations of areas are as follows: area 1 - Caribbean (CAR), area 2 - Gulf of Mexico (GOM), area 3 - Florida East Coast (FEC), area 4 - South Atlantic Bight (SAB), area 5 - Mid Atlantic Bight (MAB), area 6 - Northeast Coastal (NEC), area 7 - Northeast Distant (NED), area 8 - Sargasso (SAR), area 9 - North Central Atlantic (NCA), area 10 - Tuna North - (TUN), and area 11 - Tuna South (TUS).

The reported yellowfin tuna catch for the three-year period was approximately 87,000 (1999), 71,000 (2000), and 55,000 (2001) fish. Numbers of yellowfin tuna reportedly caught decreased by 23% from 2000 to 2001(Tables 1a-1c).

In the GOM, the reported catch of yellowfin in numbers increased annually from 1990 through 1992 and decreased annually from 1993-1995. GOM catches of yellowfin increased annually from 1996 through 1999, with the exception of a slight decrease in 1998. GOM yellowfin tuna catches have decreased since 2000 (Tables 1a-1c).

In 1999, there were 87,174 swordfish tabulated from longline records (caught = kept + discarded). There were 77,548 swordfish reported in 2000; and 60,283 reported in 2001(preliminary). Except for a slight increase in 1998, reported swordfish catches have declined annually from 1995 to 2001. The reported fishing effort for 1999, 2000, and 2001 was roughly 7.8, 7.6, and 7.5 (preliminary) million hooks respectively (Tables 1a-1c). The preliminary number of reported hooks fished decreased by 1% in 2001 compared to 2000.

Vessels operating in the MAB, NEC, SAR, NCA and TUN (see Figure 1 for the location of these fishing areas) reported increases in annual swordfish catch by longline boats in 2001 compared to 2000. All other areas reported a decrease in annual swordfish catch in 2001 (see Tables 1a-1c).

REPORTED FISHING LOCATIONS IN 1999, 2000, AND 2001

The location of reported commercial pelagic fishing effort by year for 1999-2001 is shown in Figures 2-4. The most notable trend is the movement of some effort into the South Atlantic since 2000. Decreased effort in FEC and NED in 2001 were due to time/area closures.

CPUE DATA

Tables 2a-2c represent 1999, 2000, and 2001 (preliminary) data, respectively, for swordfish and yellowfin tuna. These data are yearly totals by areas as defined in Figure 1which indicates number of fish kept; number discarded dead and discarded alive; kept+discarded; effort in HOOKS; the number of sets; and the average of the individual catch rates, AV(C/E) (equivalent to average CPUE). These summaries include longline sets and exclude logbook reports that report fishing for multiple sets in a single report. As such, this information would include effort directed at species other than swordfish or tunas.

The totals reported in Tables 1a through 1c are different from the totals in Tables 2a through 2c because different criteria were used in selecting the records to be used. Tables 1a through 1c represent data from longline boats only, including summary reports filed by longline boats. Tables 2a through 2c represent all longline records except summary reports.

The data summarized here are considered to represent nominal CPUE. No attempt has been made in this summary to standardize the data for factors not related to fish abundance, but known to affect the CPUE values. Those analyses are carried out for the purpose of stock assessments, and are reported elsewhere.

The reported swordfish catch rates in 1999 for the CAR, FEC, SAB, NED and the NCA were, respectively, approximately 2.2 fish/100 hooks, 2.9 fish/100 hooks, 2.7 fish/100 hooks, 4.1 fish/100 hooks and 2.0 fish/100 hooks (Table 2a). In 2000, swordfish catch rates were approximately 2.1 fish/100 hooks, 2.2 fish/100 hooks, 1.8 fish/100 hooks, 3.1 fish/100 hooks and 2.6 fish/100 hooks (Table 2b). In 2001 (preliminary), approximations of catch rates in these areas were 2.1 fish/100 hooks, 1.1 fish/100 hooks, 1.6 fish/100 hooks, 2.7 fish/100 hooks and 2.4 fish/100 hooks (Table 2c). The highest reported 2000 swordfish catch rates (3.1 fish/100 hooks) was in the TUN.

Average reported CPUEs for yellowfin on an annual basis were consistently high and increasing in the GOM from 1996 through 1998. Yellowfin CPUEs in the GOM decreased slightly in 1999 and continued to decrease in 2000 and 2001. In 2001 the highest yellowfin CPUE reported was in the MAB approximately 1.0 fish/100 hooks(table 2c). The reported catch rates in the GOM in 2000 were approximately 0.9 fish/100 hooks (Table 2c).

Monthly reported CPUEs for swordfish, yellowfin, bigeye, and albacore from 1987 to 2001 are shown in Figures 5a -5d. The error bars represent $\pm$ 2 standard errors from the mean.

SWORDFISH STOCK STATUS

A new stock assessment for swordfish was conducted in 2002. High recruitment levels observed in recent years (age 1 in 1997 - 2001) have resulted in a more optimistic outlook than previous projections since the recent year-classes were not heavily harvested. The updated indices examined in 2002 confirmed that a positive effect of this strong recruitment has manifested in older ages and in the biomass indices of several fisheries. Biomass at the beginning of 2002 was estimated to be 94% (range: 75 to 125%) of the biomass needed to produce maximum sustainable yield (B_{MSY}).

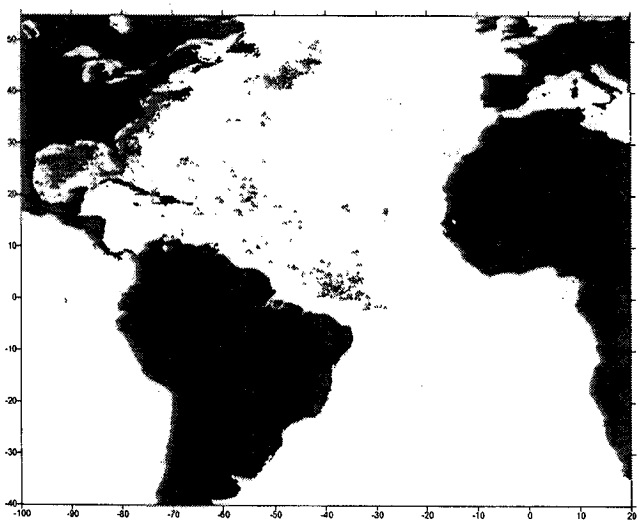

Figure 2. Location and density of reported longline effort in 1999

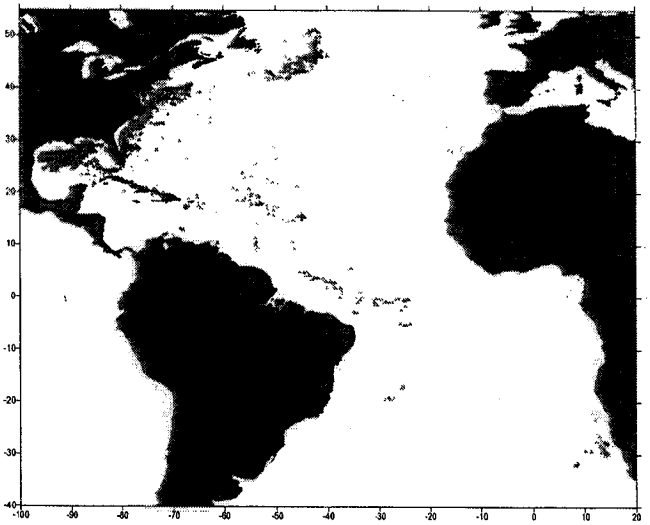

Figure 3. Location and density of reported longline effort in 2000

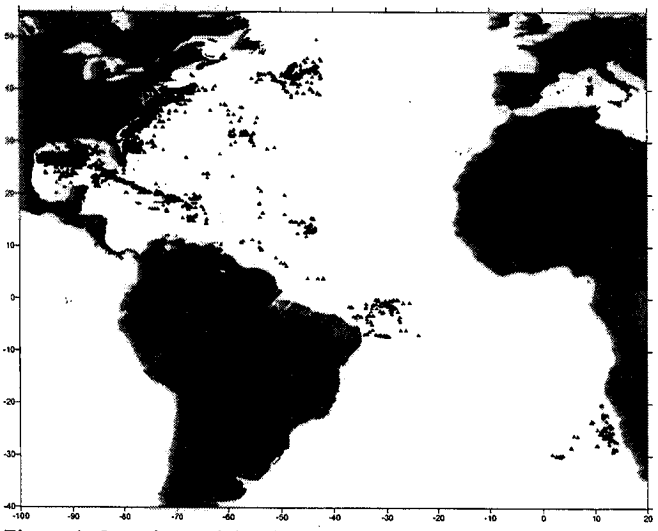

Figure 4. Location and density of reported longline effort in 2001

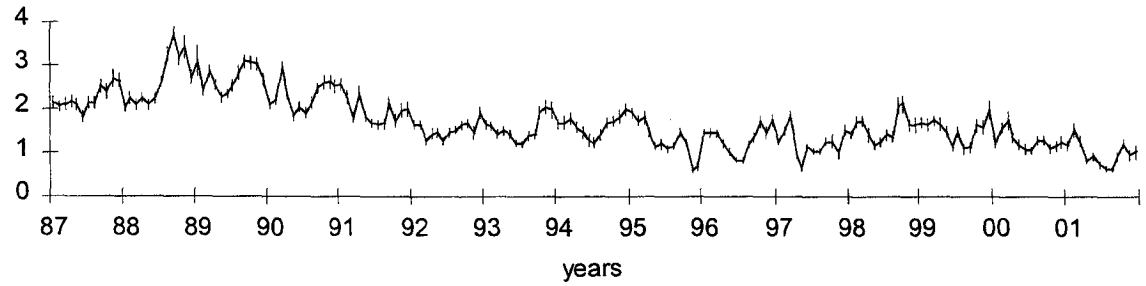

Figure 5a. Monthly Swordfish CPUE's 1987-2001

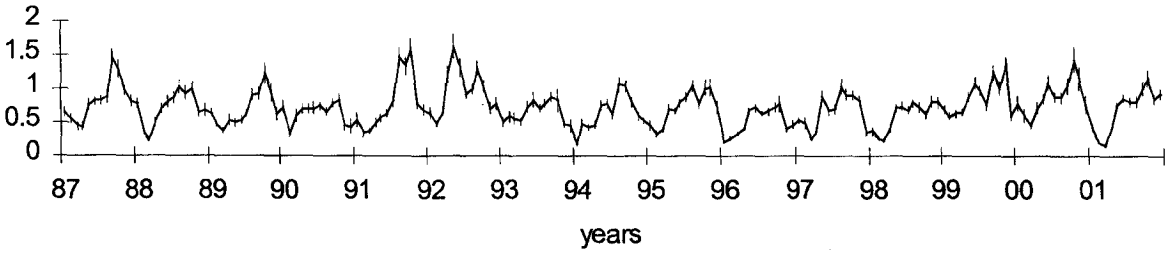

Figure 5b. Monthly Yellowfin Tuna CPUE's 1987-2001

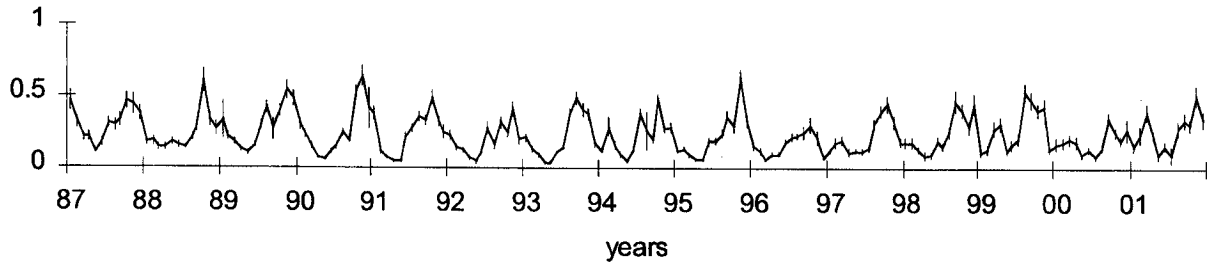

Figure 5c. Monthly Bigeye Tuna CPUE's 1987-2001

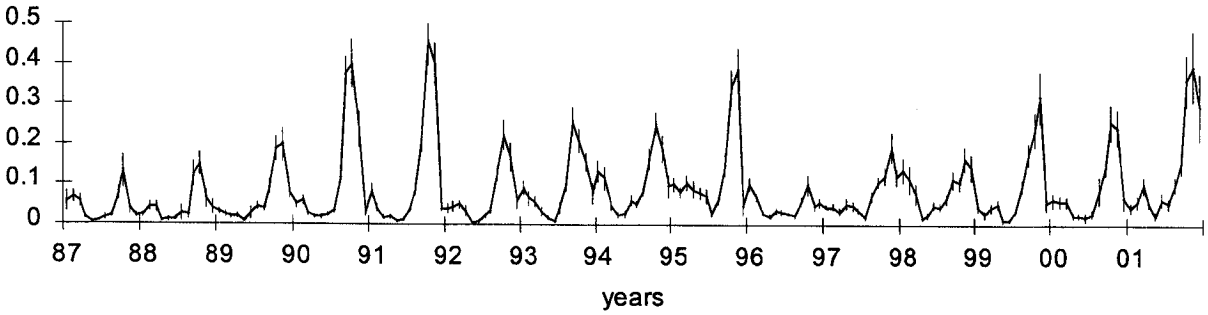

Figure 5d. Monthly Albacore Tuna CPUE's 1987-2001

The replacement yield for the year 2002 was estimated to be about maximum sustainable yield (MSY). If total catch from 2003 and beyond, including discards and overages, is less than MSY, there is a greater than 50% chance that the population would reach B_{MSY} within the recovery program plan time-frame.

The status of the south Atlantic stock is less certain than the status of the north Atlantic stock due to the limitations of the indices of abundance and the absence of age and growth data. There was considerable conflict in trends among the three CPUE series and it is unclear which, if any, of the series tracks total biomass. Due to inconsistencies in the available CPUE trends reliable stock assessment results could not be obtained (Table 3). Given the recent expansion of the fishery, and the apparent stability in at least one target fishery, the International Commission for the Conservation of Atlantic Tunas (ICCAT) committee recommended that catch should remain at about the same level of the past few years to maintain the stock at about the current abundance.

ALBACORE STOCK STATUS

No new stock assessment for albacore tuna was conducted in 2002. Northern and Southern albacore stock assessments were conducted in 2000. A summary of the resource status from those assessments are shown in the Table 4.

The 2000 assessment of the North Atlantic albacore stock was consistent with previous assessments. Equilibrium yield analysis, made on the basis of an estimated relationship between stock size and recruitment, indicated that current stock biomass is about 30% below that associated with MSY. However, the equilibrium yield per recruit analysis did not indicate growth over fishing of this stock. ICCAT concluded that the northern stock is probably below B_{MSY}, but the possibility that it is above B_{MSY} could not be dismissed.

The South Atlantic albacore assessment indicated that the stock was not being over fished and that the (1997-2000) level for landings could probably be maintained into the near future without causing a substantial decline in spawning stock biomass. Estimated biomass levels were above those at MSY and fishing mortality levels were about 50% below levels of fishing mortality levels at maximum sustainable yield (F_{MSY}). These estimates were based on models that did not fit the data well. However, the 2001 catch (provisional catch plus carry overs) was well above both the replacement yield (22%) and MSY (18%).The effect of such high catches on the future of the resource is of concern.

BIGEYE STOCK STATUS

A new stock assessment for bigeye tuna was conducted in 2002. A summary of the resource status of bigeye from the 2002 assessment is shown in the Table 5.

The 2002 assessment indicated that bigeye tuna stock has declined to below MSY due to the large catches made since the mid-1990s and that the current F is higher than F_{MSY}. Projection results suggest that the biomass of the stock will not decline further with constant catches of 100,000 metric tons (MT), which is very close to the reported catch for 2001. Increases in biomass are expected with catches of 95,000 MT or less, and further declines in biomass are expected with catches of 105,000 MT or more.

YELLOWFIN STOCK STATUS

No new stock assessment for yellowfin tuna was conducted in 2002. A full assessment was conducted for yellowfin tuna in 2000. A summary of the assessment and updated yields are shown in the Table 6.

The 2000 production model analyses imply that although yellowfin tuna catches could be slightly lower than MSY levels, effort may be either above or below the MSY level depending on assumptions made about changes in fishing power. Consistent with the production model results, yield-per-recruit analyses also indicate that current (1999) fishing mortality rates could be above or about levels which produce MSY. Yield-per-recruit analyses further indicate that an increase in effort is likely to decrease the yield-

per-recruit, while reductions in fishing mortality on fish less than 3.2 kg could result in substantial gains in yield-per-recruit and modest gains in spawning biomass -per-recruit.

In summary, yellowfin landings appear to be close to MSY level and fishing effort and fishing mortality may be in excess of the levels associated with MSY. For this reason, it is important to ensure that effective fishing effort does not increase further.

MANDATORY REPORTING IN THE ATLANTIC LARGE PELAGIC FISHERY

Federal regulations require that both fishermen and dealers assist the conservation and management of large pelagic species by providing statistics on fishing activity and seafood production respectively. Fishermen are required to submit data on daily fishing activity and catch, which includes individual carcass weights for the swordfish and other large pelagic species. Dealers are required to provide summary data on the landings (purchases) by market or size category and the price or value for the respective categories. Both fishermen and dealers are required to maintain active federal permits to fish or purchase swordfish.

Fishermen Reporting.

All fishermen that fish for and land swordfish are required to have an active permit and report the catches from every set or daily trip. In addition to a completed logbook sheet for every set, fishermen are required to submit a copy of the weigh-out or sales receipt that provides the weights for the individual swordfish and other large pelagic species that are caught on the fishing trip. If either of these requirements are not met, the vessel is not in compliance and the vessel's permit can be revoked or denied at the annual renewal.

If the vessel did not fish during a calendar month, a "no-fishing" report must be submitted. If logbooks and weighouts were not submitted for the catch of the 12 months in the reporting period prior to the expiration of the permit, the application for renewal was denied until all reporting was brought up to date.

Dealer Reporting.

As of July 1 , 1999 access to swordfish permits was restricted to individuals qualifying on the basis of historic catch in the fishery. During 2001, there were 467 active swordfish vessel permits, and of those, 226 were directed, 129 were incidental, and 100 were hand gear swordfish permits. These permits were not necessarily active during the entire calendar year, nor did all of these vessels actively fish for or catch large pelagic species.

All logbook reports and weigh-outs are to be submitted to the

Southeast Fisheries Science Center
Logbook Program
P.O. Box 491740
Key Biscayne, Florida 33149-9915

Questions or requests for clarifications can be directed to Logbook Program at the Southeast Fisheries Science Center, telephone number (305) 361-4581.

Numbers of Active Vessels.

A compilation of activity related to the vessels permitted during the period 1987 through 2001 is presented in Table 7. "Fished" implies a vessel submitted at least one positive fishing report during that year, "Caught Swordfish" means the vessel reported catching at least one swordfish during that year and "Caught Swordfish in 5 months" means the vessel reported catching at least one swordfish per month in at least five months of that year. "Hooks Reported" includes all submitted logbooks whether or not they represented single pelagic longline sets, summary records, bottom longline records or effort from gears other than longline. For this reason, these numbers are higher than the numbers in Tables 1a-1c.

Permitted dealers are required to provide reports twice a month to the Science and Research Director for either the Northeast Region or the Southeast Region, depending on the dealer's geographical location. Complete and timely information from dealers is critical because these data are used to monitor the fishery quota for swordfish. Dealers are instructed to provide the U.S. Coast Guard documentation or state registration number for every vessel from which they purchased swordfish during each two week reporting period. This information is used to check the dealer data against the daily catch data submitted by fishermen. This cross reference helps determine that all landings are included in the quota monitoring process and it also guards against potential double counting.

Reports should be mailed to:

National Marine Fisheries Service
Southeast Fisheries Science Center
Science and Research Director
Attention: Andy Bertolino
75 Virginia Beach Drive
Miami, Florida 33149

Dealers conducting business principally in an Atlantic coastal state from Maine to Virginia should report to:

National Marine Fisheries Service Northeast Regional Office
Attention: Greg Power
1 Blackburn Drive
Gloucester, MA 01930

For most dealers in the Northeast Region, NMFS port agents contact and collect the dealer reports.

At sometime during calendar year 2001, a Federal dealer permit was held by 364 dealers. Of this total, 105 dealers had their primary location in the Northeast Region and 178 dealers had their primary location in the Southeast Region, which includes the Caribbean. In addition, there were 81 dealers that are located in other areas of the United States. These dealers
have been issued a swordfish dealer permit because they import swordfish.

Overall, compliance with the reporting requirements has been good in this area. However, dealers that do not cooperate with the NMFS and do not submit the required bi-monthly reports will have their application for a permit renewal denied, and NMFS Law Enforcement will be notified. It should be noted that a report is required for every two week period, even if large pelagic species were not purchased. If no purchases were made, the respective Center Director must be informed. In the Southeast Region, a form so-stating must be submitted.

SWORDFISH LANDINGS

The Southeast Fisheries Science Center (SEFSC), Miami Laboratory, is responsible for compiling the landings of U.S caught Atlantic swordfish from mandatory reporting data. The monthly reported landings for 1991 - 2001 in the North Atlantic are presented in Table 8. U.S. North Atlantic swordfish landings decreased each year from 1992 to 1994, increased slightly in 1995, then decreased again from 1996 to 2001 (Table 12). Monthly cumulative annual landings of U.S. swordfish in the North Atlantic are compared in Figure 6 for even years from 1992 to 2001. Yearly U.S. North Atlantic swordfish landings from 1994 to 2001 were lower than 1992 landings. These lower levels are, in part, the result of the minimum size regulation, time/area closures and fishery closures when allowable landing levels for the directed fishery were achieved.

TABLE 12. SWORDFISH COMMERCIAL LANDINGS IN THE U.S. NORTH ATLANTIC.

1,000 lbs. Year	1,000 lbs. Dressed wt.	Whole wt.
1991	7,142	9,499
1992	6,383	8,489
1993	6,274	8,345
1994	5,578	7,419
1995	6,764	8,996
1996	5,889	7,832
1997	4,933	6,561
1998	5,061	6,731
1999	4,783	6,362
2000	4,720	6,278
2001	3,672	4,884

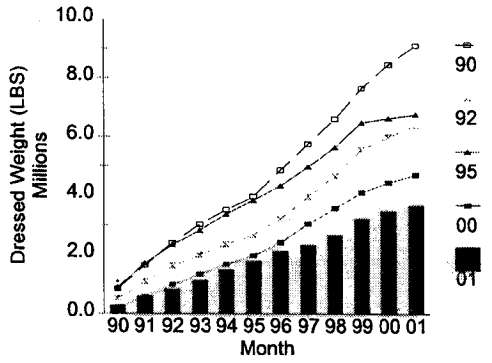

Figure 6. Swordfish Landings in the North Atlantic

SWORDFISH < 41 LBS. DRESSED WEIGHT - NUMBER AND PERCENT LANDED BY MONTH BY AREA

The cumulative percent of fish landed less than 41 lbs dressed weight from all areas and all months fell from 38% in 1990 to 12% in 1995, went up to 21% in 1998, and fell to 17% in 2001 (Table 10). The within area percentage landed catch of fish less than 41 lbs decreased in most areas between 1991 and 1995, but increased from 1996 to 1998, and has declined in 2000 and 2001 (Table 10). The highest numbers of undersize fish landed in 2001 were from the SAB region (Tables 9, 10 & 11).

SWORDFISH < 41 LBS. DRESSED WEIGHT - PERCENT LANDED

The proportion of U.S. Atlantic swordfish landed which were smaller than 41 lbs dressed weight has decreased since 1990 (Figure 7). In 1990 the highest number of fish landed were in the 21-41 lb category. In 1991, this peak shifted to the 41-60 lb category where it has since remained.

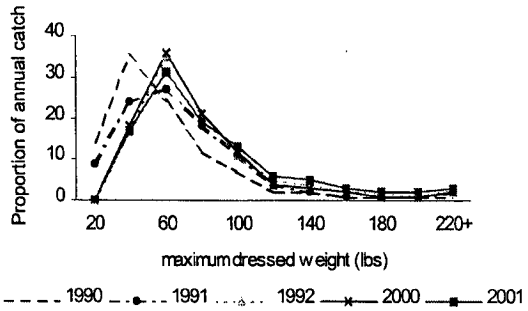

Figure 7. U.S. Catch at size

SWORDFISH SIZE FREQUENCY

The proportion of swordfish landed which were less than 41 lbs dressed weight in size frequency samples from U.S. longline vessels, decreased from 1989 through 1995, but has increased since 1996. However, in 2000 and 2001, these numbers have remained constant (Figure 8a). The initial decrease resulted from the minimum size measure put in place in mid 1991. The increase since 1996 is probably the result of lowering the minimum size from 41lbs to approximately 33lbs in mid 1996.

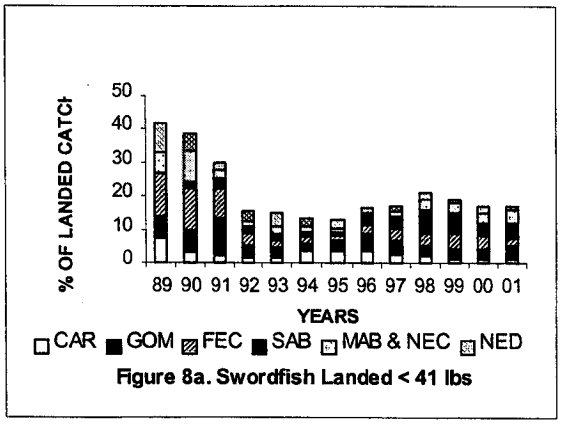

Figure 8a. Swordfish Landed < 41 lbs

The proportion of swordfish landed which were less than 33 lbs dressed weight is shown in Figure 8b. The percentages of landed fish below 33 lbs dressed weight were less than 0.1% in each area from 1998 through 2001.

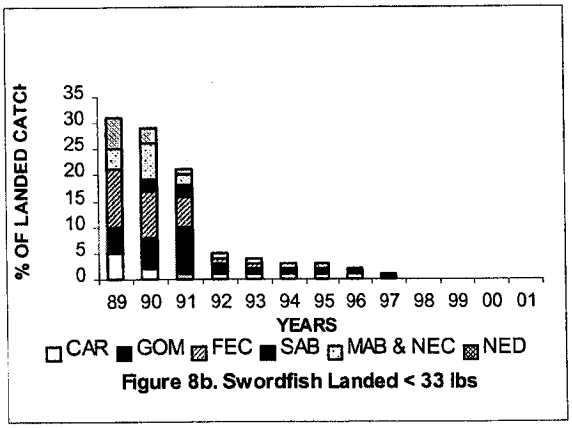

Figure 8b. Swordfish Landed < 33 lbs

BYCATCH ESTIMATION

The 2001 observer and 2001 logbook records were used to estimate the number of discarded dead swordfish (27,321), blue marlin (439), white marlin (945), sailfish (609), dusky sharks (94), silky sharks (2,002), hammerhead sharks (978), night sharks (1,233), coastal sharks (1,250), blue sharks (5,219) and pelagic sharks (939).

REGULATIONS

Regulations affecting pelagic longline fishing for highly migratory species include, prohibition of the use of live bait on longline gear in the Gulf of Mexico, the requirement to have on board and use a dipnet and a line clipper to reduce mortality of captured sea turtles, and time area closures in the five areas as defined in Figure 9.

The DeSoto Canyon area is closed year-round as of November 1, 2000. This area, composed of two squares offshore of the west coast of Florida, is defined as the area within the following coordinates: 30° 00' N. lat., 88° 00' W. long.; 30° 00' N. lat., 86° 00' W. long.; 28° 00' N. lat., 86° 00' W. long.; 28° 00' N. lat., 84° 00' W. long.; 26° 00' N. lat., 84° 00' W. long.; 26° 00' N. lat., 86° 00' W. long.; 28° 00' N. lat., 86° 00' W. long.; 28° 00' N. lat., 88° 00' W. long.; 30° 00' N. lat., 88° 00' W. long.

The Florida East Coast area was closed year-round effective March 1, 2001. This area includes the Atlantic Ocean area seaward of the U.S. EEZ from a point intersecting the inner boundary of the U.S. EEZ at 31° 00' N. lat. near Jekyll Island, Georgia, and proceeding due east to connect by straight lines the following coordinates in the order stated: 31° 00' N. lat., 78° 00' W. long., 28° 17' N. lat., 79° 12' W. long.; then proceeding along the outer boundary of the EEZ to the intersection of the EEZ with 24° 00' N. lat., then proceeding due west to the following coordinates: 24° 00' N. lat., 81° 47' W. long.; then proceeding due north to intersect the inner boundary of the U.S. EEZ at 81° 47' W. long. near Key West, Florida. (The graphic representation of this area is approximate.)

The Charleston Bump area was closed March 1, 2001, through April 30, 2001 (closed February 1 to April 30 thereafter). This area includes the Atlantic Ocean area seaward of the inner boundary of the U.S. EEZ from a point intersecting the inner boundary of the U.S. EEZ at 34° 00' N. lat. near Wilmington Beach, North Carolina, and proceeding due east to connect by straight lines the following coordinates in the order stated: 34° 00' N. lat., 76° 00' W. long.; 31° 00' N. lat., 76° 00' W. long.; then proceeding due west to intersect the inner boundary of the U.S. EEZ at 31° 00' N. lat. near Jekyll Island, Georgia.

The bluefin tuna area is closed during the month of June as of June 1, 1999. This area is a rectangle bounded by the coordinates: 40° 00' N. lat., 68° 00' W. long.; 40° 00' N. lat., 74° 00' W. long.; 39° 00' N. lat., 74° 00' W. long., and 39° 00' N. lat., 68° 00' W. long.

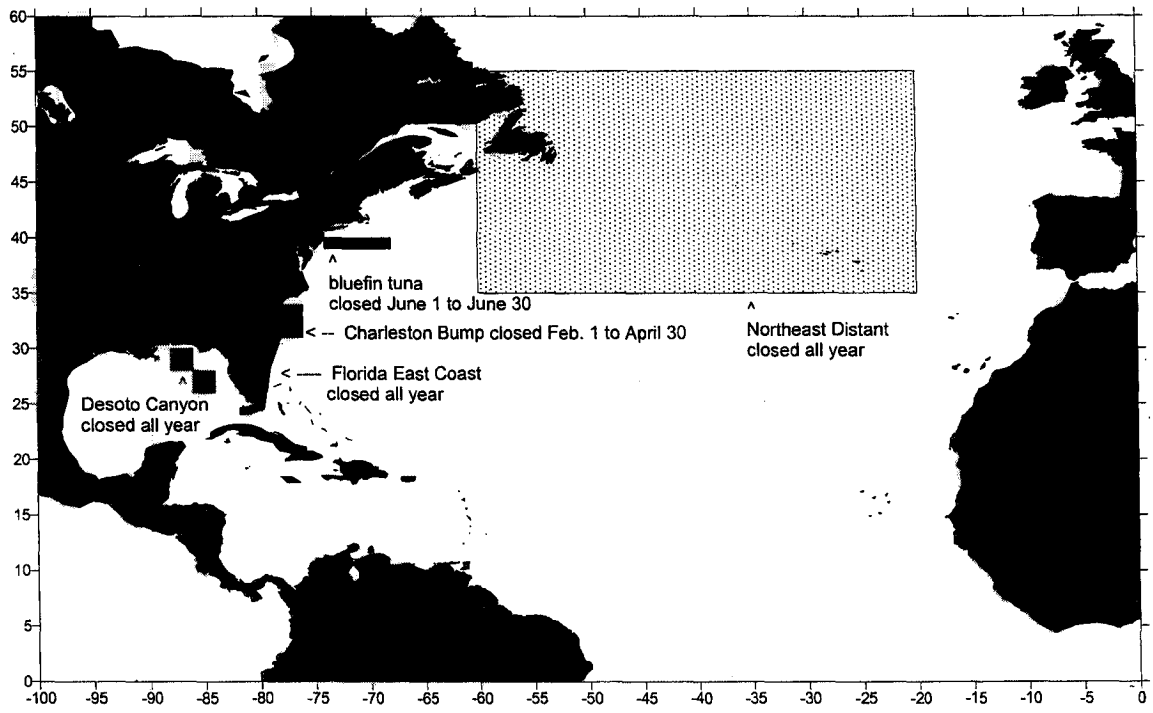

Figure 9. Atlantic pelagic longline fishery time area closures

The Grand Banks area is closed all year. This area is bounded by the following coordinates: 45° 00' N. lat., 49° 00' W. long.; 45° 00' N. lat., 43° 00' W. long.; 43° 00' N. lat., 43° 00' W. long., 43° 00' N. lat., 47° 00' W. long., 41° 00' N. lat., 47° 00' W. long., and 41° 00' N. lat., 49° 00' W. long

TAGGING HIGHLIGHTS

2001 Highlights from Cooperative Tagging Center

SWORDFISH

During 2001 a total of 72 swordfish were tagged and released by NMFS, Cooperative Tagging Center (CTC) participants. There were 60 fish tagged and released using longline gear and 12 fish by rod and reel gear. Of the 72 releases, 9 fish were reported as recaptures to the CTC .

Six recaptures were recovered using longline gear and 2 recaptures were recovered with the use of harpoon and gillnet (1 each) gear. One recapture report did not list the type of gear used for recapture. The longest time at large for a swordfish recaptured in 2001 was 3,254 days (8.92 years). This fish was initially tagged and released on 8/03/1992 off of Georges Bank (40° 27 N x 67° 23 W) and recaptured on 7/01/2001 off Nova Scotia, but in the same general area (42° N x 62°W). There were two other recaptured fish that were at large for 7.99 and 8.09 years each. The longest distance traveled by any swordfish was about 1800 miles for a fish tagged in the Straits of Florida and recaptured 1,626 days (4.45 years) later off Nova Scotia.

WHITE MARLIN

There were 290 white marlin tagged in 2001. Only 1 was recaptured during 2001 and it was with gill net gear. It was initially tagged and released on 7/06/2000 off Pensacola, Florida (29° 47 N x 87° 11 W) and was recaptured 259 days later off Venezuela (11° 67 N x 67° 87 W). The traveling distance of this fish was about 1800 miles.

SAILFISH

There were 596 sailfish tagged in 2001. Fifteen were recaptured during 2001. All of the sailfish were both initially captured and recaptured using rod and reel gear. Twelve fish were recaptured within 50 miles of the release location and were at large from 6 to 2981 (8.16 years) days. One fish traveled from the waters off of Cozumel to Key Largo in 232 days. Another fish traveled from North Key Largo, Florida to the northern Gulf of Mexico off Mobile, Alabama. The longest time at large for a sailfish was 3216 days (8.81 years). This fish was initially tagged off North Key Largo and, after traveling 1100 miles, was recaptured off Long Island, New York.

BLUE MARLIN

There were 314 blue marlin tagged in 2001. Five were recaptured during 2001. All of the fish were initially captured through the use of rod and reel gear. Three fish were recaptured with rod and reel gear while two fish were recaptured by gillnet. One of these gillnet recaptures was an exceptionally long term recovery at 4320 days (11.83 years). This fish was tagged in Mona Pass (18°N x 68°W) and recaptured, only 300 miles away off Bonaire (11° 67 N x 67° 87 W).

BLUEFIN TUNA

There were 297 bluefin tuna tagged in 2001. Forty-nine tagged fish were recaptured during 2001. The majority of the releases and recaptures were by of rod and reel gear. There were three recaptures by the use of harpoon gear, one with hand line, one by bait boat, one by purse seine, two by trap net, two by longline , and two recaptures reported with no gear indicated. There were four fish that were recaptured in the Eastern North Atlantic. Three of these fish were tagged off Long Island, New York and one other was tagged off Cape Hatteras, North Carolina. One was recaptured in the Bay of Biscay offshore of southwestern Spain. One was recaptured offshore to the southwest of Portugal in the Straits of Gibraltar. One was recaptured in the western Mediterranean Sea off of the Baelaric Islands with a minimum distance traveled of about 3900 miles. The last of those eastern recaptures was from the southeastern Canary Islands. These fish were at large for 485 to 2,566 days (7.03 years).

YELLOWFIN TUNA

There were 130 yellowfin tuna tagged in 2001. Six fish were recaptured during 2001. There was one trans-equatorial movement from a fish tagged near the Ascension Islands and recaptured offshore of Senegal. There was one trans-oceanic movement as well. A fish tagged off the coast of Maryland was recaptured off the Ivory Coast, Africa with a minimum distance traveled of about 4800 miles.

PELAGIC OBSERVER PROGRAM (POP)

The National Marine Fisheries Service (NMFS) continues its scientific observer sampling of the U.S. large pelagic fleet, as mandated by the Highly Migratory Species Fisheries Management Plan. Scientific observers are placed aboard vessels participating in the North Atlantic, Gulf of Mexico, and Caribbean large pelagic fisheries.

Observers are placed on board vessels to record detailed information on gear characteristics, the location and time of the gear set and retrieval, environmental conditions, the condition and status of the animals caught by the gear (alive or dead, kept or discarded), as well as morphometric measurements (length and weight) and sex identification when possible. Observers also record the occasional interaction of marine mammals and sea turtles. The collection of biological samples (anal fins, heads, reproductive tissue, heart tissue, etc.) from some animals are used to support research studies to learn more about fish biology and life history behavior.

Of the 177,164 fish and protected species

recorded by POP observers from 1992-2002 and summarized in various species groups (Figure 10), swordfish was the most frequently caught at ~27% of total catch.

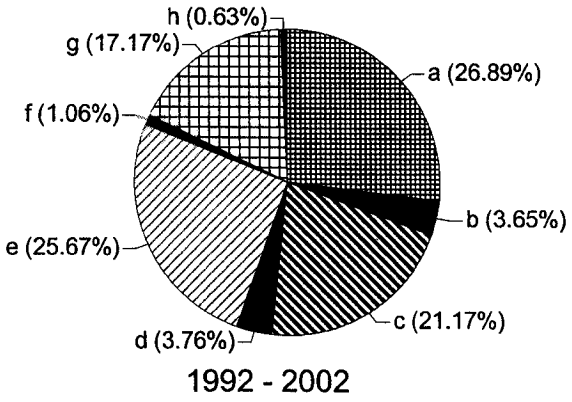

Figure 10. Catch reported by scientific observers on U.S. longline vessels: swordfish (a); billfish (b); yellowfin, bigeye and bluefin tuna (c); other tunas (d); sharks and rays (e); unknown species (f); finfish (g); marine turtles, marine mammals, and birds (h)

INSTRUCTIONS FOR USING THE PELAGIC LOGBOOKS FOR 2003

Samples of forms and directions for completing forms are presented in Appendices 1-6. There are 4 forms used for pelagic logbook reports in 2003: (1) a *trip summary* form, (2) a *cost and earnings* form, (3) a *set* form, and (4) a *no fishing* form.

The trip summary form must be completed for every fishing trip landed when swordfish and/or tuna are caught and retained on board. A set form must be completed every time the gear is set during a trip. A trip summary, set forms and a weigh-out sheet must be submitted for every completed fishing trip.

The cost and earnings form is used to provide information on the costs associated with each fishing trip. Beginning in 2003, this information is mandatory for selected vessels and voluntary for all other vessels.

The no-fishing form should be used to report occurrences of no fishing activity in the Swordfish/Tuna (also indicated as Highly Migratory Species) , South Atlantic Snapper-Grouper, Gulf of Mexico Reef Fish, Shark, King Mackerel, and Spanish Mackerel fisheries. Check the space by each of the fisheries in which the vessel did not fish. **ONLY SUBMIT ONE *NO-FISHING* FORM FOR EACH MONTH NOT FISHED.** Do NOT check fisheries for which your vessel does not have an active permit.

All forms are to be mailed in the pre-addressed, postage-paid envelopes that are included in the logbook packet.

If the logbook forms are mailed in another envelope, please use the following address:

NATIONAL MARINE FISHERIES SERVICE
ATTN: LOGBOOK PROGRAM
P.O. BOX 491500
KEY BISCAYNE, FLORIDA 33149-9916

If there are questions regarding completion of these forms, please call (305) 361-4240.

Monthly reporting for individuals holding a swordfish permit will be considered complete and in compliance with federal regulations only if: 1) the trip summary , individual set records and weigh-out sheet(s) for each trip are completed and provided during the month in which the trip(s) occurred, or, 2) a no fishing report is provided.

Again, as noted on the 2003 logbook forms, **use of the current year forms is mandatory for compliance.** Furthermore, **all old forms *should be destroyed*** upon receipt of the 2003 forms.

CONTACT INFORMATION

Any questions concerning Atlantic large pelagic species projects at NMFS Southeast Fisheries Science Center can be directed to Dr.

Gerald Scott at (305) 361-4220. Questions concerning the processing and analysis of the logbook data can be directed to Andy Bertolino at (305) 361-4240. Information concerning permits can be directed to the NMFS Regional Office Fisheries Permits Team in St. Petersburg, Florida at (727) 570-5326. Questions about the observer program should be directed to Dennis Lee or Cheryl Brown at 1-800-858-0624.

Those needing 2003 logbooks can contact the logbook program at (305) 361-4581.

***If you have questions or comments regarding this newsletter, contact Andy Bertolino, NMFS, SEFSC, 75 Virginia Beach Drive, Miami, FL 33149.

Table 1. TOTAL NUMBER OF SWORDFISH, TUNA, AND BILLFISH REPORTED CAUGHT BY LONGLINE BOATS, BY AREA, AND EFFORT IN NUMBER OF HOOKS, FROM THE SWORDFISH MANDATORY LOGBOOKS, FOR (a) 1999, (b) 2000 and (c)2001 (PRELIMINARY). NUMBERS CAUGHT REPRESENT KEPT PLUS DISCARDED (DEAD OR ALIVE). SEE FIGURE 1 FOR DESIGNATION OF AREAS. (SWD=SWORDFISH; YFT=YELLOWFIN; BET=BIGEYE; BFT=BLUEFIN; ALB=ALBACORE; WHM=WHITE MARLIN; BUM=BLUE MARLIN; SAI=SAILFISH.)

1a. 1999

Area	SWD	YFT	BET	BFT	ALB	WHM	BUM	SAI	HOOKS	BOATS
CAR	3220	116	250	2	120	166	60	32	158340	18
GOM	13080	60636	811	324	107	670	703	882	3577412	92
FEC	16854	1589	2767	63	496	229	198	292	709503	53
SAB	19711	5678	118	14	47	148	143	166	764908	45
MAB	7896	13496	11433	202	5696	370	51	3	1271713	68
NEC	4408	3962	4768	203	1448	338	51	0	587225	39
NED	13877	13	1063	54	116	16	3	0	338719	10
SAR	208	162	45	4	49	10	1	4	17795	3
NCA	2253	76	172	0	151	15	3	1	116331	9
TUN	568	302	282	0	13	5	5	0	41241	9
TUS	5099	547	1685	0	42	13	38	32	189520	8
TOTAL	87174	86577	23394	866	8285	1980	1256	1412	7772707	195

1b. 2000

Area	SWD	YFT	BET	BFT	ALB	WHM	BUM	SAI	HOOKS	BOATS
CAR	4996	193	285	2	157	82	72	7	244829	18
GOM	14533	41280	867	474	131	584	841	355	3490005	79
FEC	12325	1513	3175	47	627	210	255	230	687050	52
SAB	13198	3090	93	15	121	128	135	84	797504	46
MAB	6629	21090	3147	267	4493	108	27	13	1018230	59
NEC	5343	3423	2364	115	1652	62	19	0	608503	36
NED	17162	67	1670	43	189	4	0	0	543699	13
SAR	49	33	4	0	18	0	0	0	7567	5
NCA	1811	104	125	1	169	60	64	0	80218	6
TUN	106	149	121	0	10	3	14	4	17695	5
TUS	1396	365	815	0	29	5	12	14	74315	3
TOTAL	77548	71307	12666	964	7596	1246	1439	707	7569615	174

1c. 2001

Area	SWD	YFT	BET	BFT	ALB	WHM	BUM	SAI	HOOKS	BOATS
CAR	3875	200	193	0	91	35	59	12	203943	18
GOM	14032	32691	333	215	190	373	348	247	3526124	78
FEC	3978	1391	4121	23	868	44	118	26	453275	41
SAB	10672	4104	134	11	146	97	70	68	780961	44
MAB	6980	10233	6174	84	5411	163	22	7	1116274	58
NEC	7541	5294	3015	156	2381	92	16	1	825609	40
NED	8372	7	1797	31	432	0	3	0	316527	9
SAR	181	33	41	2	40	0	1	0	14287	8
NCA	2331	56	260	4	180	38	17	0	107233	8
TUN	1355	382	591	0	89	36	8	0	61389	8
TUS	966	416	1471	0	102	0	0	0	117250	3
TOTAL	60283	54807	18130	526	9930	878	662	361	7522872	158

Table 2. YEARLY TABULATIONS FOR SWORDFISH AND YELLOWFIN TUNA FOR (a) 1999, (b) 2000 AND (c) 2001 (PRELIMINARY). THE AREAS ARE DEFINED IN FIGURE 1. INFORMATION INCLUDES NUMBER OF FISH KEPT PLUS DISCARDED (K&D); PERCENTAGE KEPT (%K), PERCENTAGE DISCARDED DEAD (%D DEAD, PERCENTAGE DISCARDED ALIVE (%D LIVE); EFFORT IN HOOKS (HOOKS); NUMBER OF SETS (N); AND AVERAGE OF THE INDIVIDUAL CATCH RATES [AVG(C/E)] , EQUIVALENT TO CPUE IN # OF FISH/100 HOOKS.

2a. 1999

			SWORDFISH					YELLOWFIN				
AREA	HOOKS	N	K&D	%K	%D DEAD	%D LIVE	AVG C/E	K&D	%K	%D DEAD	%D LIVE	AVG C/E
CAR	155340	275	3212	82	11	6	2.20071	116	77	16	6	0.07947
GOM	3440700	4585	11781	69	18	12	0.46056	48083	97	1	0	1.36888
FEC	708923	2034	16799	73	14	12	2.91370	1567	95	1	3	0.19232
SAB	818018	1452	19681	75	13	11	2.75496	5663	95	1	3	0.73120
MAB	1301275	1855	7855	62	18	18	0.66848	13439	96	0	2	1.25871
NEC	587225	733	4380	72	13	13	0.78260	3942	84	3	12	0.68795
NED	338719	408	13874	86	6	6	4.08161	13	100	0	0	0.00432
SAR	16795	22	208	82	11	6	1.25121	2	100	0	0	0.01264
NCA	116331	156	2218	89	5	4	1.99336	76	86	0	13	0.06834
TUN	41241	52	568	81	9	9	1.34807	302	100	0	0	0.69767
TUS	189520	233	5099	91	4	4	2.83218	547	98	0	0	0.29806
TOTAL	7714087	11805	85675	76	12	10	1.45625	73750	96	1	2	0.90713

2b. 2000

			SWORDFISH					YELLOWFIN				
AREA	HOOKS	N	K&D	%K	%D DEAD	%D LIVE	AVG C/E	K&D	%K	%D DEAD	%D LIVE	AVG C/E
CAR	244829	410	4985	92	3	4	2.14656	193	97	1	1	0.07361
GOM	3502155	4582	14489	66	19	13	0.58837	41160	97	1	1	1.14603
FEC	687050	1956	12313	76	13	10	2.22068	1513	96	0	2	0.17640
SAB	869024	1343	13153	78	10	10	1.82302	3084	62	3	4	0.37328
MAB	1064617	1662	6606	65	21	13	0.65235	21006	98	1	0	2.90015
NEC	608503	742	5298	81	8	10	0.88844	3401	98	0	0	0.56495
NED	543699	603	17162	87	6	6	3.14718	67	97	0	2	0.01242
SAR	7567	10	49	91	2	6	0.62696	33	100	0	0	0.41224
NCA	80218	125	1800	91	5	3	2.58540	99	100	0	0	0.10060
TUN	17695	21	106	83	3	12	0.56510	149	97	0	2	0.86199
TUS	74315	84	1386	84	6	8	1.88964	360	99	0	0	0.47023
TOTAL	7699672	11538	77347	78	11	9	1.25751	71065	97	1	1	0.99226

2c. 2001

			SWORDFISH					YELLOWFIN				
AREA	HOOKS	N	K&D	%K	%D DEAD	%D LIVE	AVG C/E	K&D	%K	%D DEAD	%D LIVE	AVG C/E
CAR	203943	306	3875	85	7	6	2.09261	200	97	0	2	0.09906
GOM	3499774	4659	13747	64	21	13	0.54098	30900	96	1	2	0.89139
FEC	453275	967	3978	79	11	9	1.14350	1391	85	13	0	0.34588
SAB	781381	1255	10683	79	10	9	1.61805	4104	95	1	3	0.61611
MAB	1116874	1650	6985	63	19	16	0.67924	10244	98	0	0	1.03071
NEC	825609	968	7541	81	10	8	0.92560	5294	98	0	0	0.63975
NED	316527	334	8372	83	9	6	2.75983	7	85	0	14	0.00260
SAR	14287	16	181	96	0	2	1.18514	33	100	0	0	0.26643
NCA	107233	149	2331	89	6	4	2.37541	56	100	0	0	0.05593
TUN	42489	57	1204	89	7	3	3.06787	320	100	0	0	0.69293
TUS	49900	42	328	80	5	14	0.64875	230	99	0	0	0.51354
TOTAL	7411292	10403	59225	76	13	10	0.94306	52779	96	1	1	0.73877

Table 3. ATLANTIC SWORDFISH RESOURCE STATUS SUMMARY

	North Atlantic	South Atlantic
Maximum Sustainable Yield[1]	14,340 MT (11,580-15,530MT)[4]	not estimated
Current (2001) Yield[2]	9,797 MT	14,251 MT
Current (2002) Replacement Yield[3]	about MSY	not estimated
Relative Biomass(B_{2002}/B_{msy})	0.94 (0.75-1.24 MT)	not estimated
Relative Fishing Mortality:		
F_{2001}/F_{MSY}[1]	0.75 (0.54-1.06)	
F_{2000}/F_{max}	1.08	not estimated
$F_{2000}/F_{0.1}$	2.05	not estimated
$F_{2000}/F_{30\%SPR}$	2.01	not estimated
Management Measures in Effect	125/119 cm LJFL minimum size; Country-specific quotas	125/119 cm LJFL minimum size; Country-specific quotas

[1] Base case production model results based on catch data 1950-2001.
[2] Includes an estimate of unreported catches.
[3] For next fishing year.
[4] 80% confidence intervals are shown

Table 4. ATLANTIC AND MEDITERRANEAN ALBACORE RESOURCE STATUS SUMMARY

	North Atlantic[1]	South Atlantic[2]	Mediterranean
Maximum Sustainable Yield	32,600(32,400-33,100)	30,200 (50-31,400)	Unknown
Current (2001) Yield	24,955 (25,052)	34,616 (35,731)	4,743 (4,743)
Replacement Yield (2000)	Not Estimated	29,200 (12,100-31,400)	Not Estimated
Relative Biomass			
B_{1999}/B_{MSY}	0.68 (0.52-0.86)	1.60 (0.01-1.98)	Not Estimated
Relative Fishing Mortality[3]			
F_{1999}/F_{MSY}	1.10 (0.99-1.30)	0.57 (0.34-556)	Not Estimated
F_{1999}/F_{max}	0.71 (0.66-0.78)	0.31 (0.28-0.33)[1]	Not Estimated
$F_{1999}/F_{0.1}$	1.25 (1.14-1.39)	0.84 (0.74-0.89)[1]	Not Estimated
Management Measures in Effect	Limit number of vessels to average number 1993-1995	Limit catches to 29,200 MT	None

[1] VPA results based on catch data (1975-1999). 80% confidence intervals from bootstrap.
[2] ASPM results based on catch data (1956-1999). 80% confidence intervals from bootstrap.
[3] F_{99} = North Atlantic Geometric Mean 1996-1998. South Atlantic, Geometric Mean 1994-1996

Table 5. BIGEYE TUNA RESOURCE STATUS SUMMARY

Maximum Sustainable Yield (likely range)	79,000-105,000 MT[1]
Current (2001) Yield	96,482 MT
Replacement Yield	
2002[2]	102,200
2003[3]	104,000
Relative Biomass(B_{2002}/B_{msy}) [4]	0.81 - 0.91
Relative Fishing Mortality:	
(F_{2001}/F_{MSY})[2]	1.15
($F_{2001}/F_{0.1}$)[3]	1.12
(F_{2001}/F_{max})[5]	0.99
Management Measures in Effect	- 3.2 kg minimum size - 25% of FADs fishing vessels and 5% others to be covered with observers -Limits on numbers of vessels. -Catch limits for those whose reported 1999 catch in 2000 was larger than 2,100 MT. -Moratorium on FAD fishing for all surface fleets Nov. 1 to Jan.. 31, in eastern tropical area..

[1] Range based on point estimates from various production models. MSY estimates obtained by delay-difference model range from 91,000 to 112,000MT.
[2] Point estimate from non-equilibrium generalized production model.
[3] Point estimate from delay-difference model.
[4] Range based on point estimates from a non-equilibrium production model and a delay-difference model.
[5] Yield-per-recruit estimate based on the 2001 selectivity pattern of 1998-2001 in the moratorium analysis.

Table 6. YELLOWFIN TUNA RESOURCE STATUS SUMMARY

Maximum Sustainable Yield (MSY)[1,3]	144,600-152,200 MT
Current (2001) Yield	157,000 MT
Current (1999) Replacement Yield	may be somewhat below current yield
Relative Biomass(B_{1999}/B_{msy}) [2, 3]	103%
Relative Fishing Mortality (F_{1999}/F_{MSY})[1,3]	88-116%
Management Measures in Effect	3.2 kg minimum size Effective effort not to exceed 1992 level Closed area/.season for fishing on FADs

[1] These are ranges of point estimates and no confidence limits are given.
[2] No estimate of uncertainty was calculated around this point estimate during the assessment. Point estimates during the 1998 assessment ranged from 92-135%
[3] Result from 2000 SCRS

Table 7. NUMBERS OF ACTIVE VESSELS

YEAR	FISHED	CAUGHT SWORDFISH	CAUGHT SWORDFISH IN 5 MONTHS	HOOKS REPORTED
1987	297	273	180	6,557,776
1988	387	337	210	7,010,008
1989	455	415	250	7,929,927
1990	416	362	209	7,495,419
1991	333	303	175	7,746,837
1992	337	302	183	9,056,908
1993	434	306	175	9,721,036
1994	501	306	176	11,270,632
1995	489	314	198	10,976,048
1996	367	276	189	10,213,223
1997	350	264	167	10,212,823
1998	286	231	134	7,886,088
1999	224	199	140	7,768,790
2000	199	181	129	7,876,642
2001	184	168	113	7,889,137

Table 8. MONTHLY NORTH ATLANTIC ESTIMATED COMMERCIAL SWORDFISH LANDINGS IN LBS DRESSED WEIGHT FROM 1991 TO 2001.

	MONTH					
YEAR	JAN	FEB	MAR	APR	MAY	JUN
1991	613,177	619,188	554,422	465,789	416,747	432,630
1992	514,101	575,942	520,099	374,432	358,252	317,612
1993	561,698	648,585	470,918	341,690	365,752	337,134
1994	484,972	472,599	458,475	327,608	299,262	383,626
1995	889,512	811,460	630,410	488,293	554,793	467,913
1996	596,262	738,304	509,953	388,765	363,694	351,284
1997	578,730	502,856	435,735	213,070	72,897	325,980
1998	456,681	541,023	547,553	145,441	170,875	285,073
1999	315,097	391,668	467,724	327,471	324,915	364,551
2000	208,729	353,898	406,805	367,792	318,839	310,434
2001	265,204	326,961	232,248	310,272	358,199	286,371

	MONTH						ANNUAL
YEAR	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL
1991	709,718	773,515	816,558	766,909	527,175	446,311	7,142,139
1992	561,906	731,830	727,037	891,336	423,457	387,010	6,383,014
1993	582,835	585,084	647,994	755,021	589,865	387,627	6,274,203
1994	290,811	539,202	560,993	672,465	592,585	495,542	5,578,140
1995	493,062	651,421	654,380	850,667	145,897	126,307	6,764,115
1996	370,895	568,722	635,336	525,918	455,680	384,352	5,889,165
1997	496,323	649,695	630,832	499,048	125,042	403,040	4,933,248
1998	355,779	713,691	460,237	505,809	500,340	378,625	5,061,127
1999	395,564	520,769	436,360	351,722	540,324	347,315	4,783,480
2000	447,465	635,918	525,254	540,394	335,448	269,125	4,720,101
2001	343,303	198,906	346,564	549,868	264,716	189,621	3,672,233

Table 9. PERCENTAGE OF ANNUAL U.S. SWORDFISH LANDED CATCH BY AREAS (TOTAL ANNUAL CATCH OF SWORDFISH IN AREA/ TOTAL ANNUAL CATCH OF SWORDFISH IN ALL AREAS).

YEAR	CAR[1]	GOM	FEC	SAB	MAB	NEC	NED
1989	20	13	21	6	7	8	24
1990	15	11	22	4	12	11	25
1991	15	19	23	4	10	4	24
1992	14	15	18	8	6	8	31
1993	18	14	15	10	7	7	30
1994	28	10	14	10	10	4	25
1995	34	17	10	8	5	5	21
1996	32	21	11	14	2	3	16
1997	30	19	13	11	4	5	18
1998	19	14	14	20	7	7	19
1999	13	16	19	22	8	4	18
2000	11	17	16	16	8	7	25
2001	14	20	7	19	10	14	15

1. CAR includes SAR, NCA, TUN, and TUS

Table 10. PERCENTAGE OF ANNUAL US SWORDFISH LANDED CATCH < 41 LBS BY AREAS (ANNUAL OF CATCH OF SWORDFISH < 41 LBS IN AREA / TOTAL ANNUAL CATCH OF SWORDFISH IN ALL AREAS).

YEAR	CAR[1]	GOM	FEC	SAB	MAB	NEC	NED	SUM
1989	5	6	11	3	3	2	7	37
1990	3	7	12	2	6	3	5	38
1991	2	10	9	3	2	0	2	28
1992	1	4	4	2	1	1	3	16
1993	2	3	2	1	1	1	3	13
1994	4	2	2	2	1	0	2	13
1995	3	3	1	1	0	1	3	12
1996	4	4	3	3	0	0	2	16
1997	3	4	3	3	1	1	1	16
1998	2	3	4	7	2	2	2	21
1999	1	3	5	6	2	1	1	19
2000	1	3	4	4	2	1	2	18
2001	1	4	2	5	2	2	1	17

1. CAR includes SAR, NCA, TUN, and TUS

Table 11. PERCENTAGE OF SWORDFISH LANDED CATCH < 41 LBS WITHIN AREAS (ANNUAL CATCH OF SWORDFISH < 41 LBS IN AREA / ANNUAL CATCH OF SWORDFISH IN AREA).

YEAR	CAR[1]	GOM	FEC	SAB	MAB	NEC	NED
1989	27	43	49	41	51	24	29
1990	22	60	54	60	52	31	21
1991	15	54	39	56	24	10	8
1992	10	26	21	23	11	11	11
1993	9	20	15	16	14	8	12
1994	13	21	15	16	13	11	10
1995	10	19	13	15	10	11	13
1996	12	20	24	21	19	10	9
1997	8	22	26	30	21	13	8
1998	8	21	29	35	25	22	13
1999	7	18	25	28	28	18	6
2000	8	20	24	28	25	21	9
2001	10	18	22	28	23	13	5

1. CAR includes SAR, NCA, TUN, and TUS

APPENDIX 1. INSTRUCTIONS FOR PELAGIC LOGBOOK TRIP SUMMARY FORMS

Please use a ballpoint pen and print clearly to record the following on the Blue Page:

- **Vessel Name** and **Vessel Number**: U.S. Coast Guard vessel identification number or state registration number as recorded on permit.
- **Contact Name and Telephone**: Printed name and telephone number of the person completing the form.
- **Captain Signature and Name**: Signature of the person completing the form (normally, this should be the captain for the trip although the vessel owner may complete the second portion of the form).
- **Port & State of Departure**: Location of port from which the trip commenced.
- **Port & State of Landing**: Location of port that vessel arrived in.
- **Dealer Name(s)**: List of names of dealers purchasing the harvest.
- **Date of Departure**: Calendar date (month/day/2003) on which the trip was started.
- **Date of First Set**: Calendar date (month/day/2003) of first set made on trip.
- **Date of Last Set**: Calendar date (month/day/2003) of last set made on trip.
- **Date of Landing**: Calendar date (month/day/2003) the vessel arrived back at port. This can be different from the offloading date.
- **First Day Offload**: Calendar date (month/day/2003) that vessel began offloading fish.
- **Number of Sets Placed**: Number of times the fishing gear was set during the trip.
- **Number of Crew Members**: Number of persons paid as crew (excluding captain).
- **State Trip Ticket #**: For states that require trip tickets, include the ticket # from your sales receipt.

Remove the blue page, attach corresponding set forms and tally sheet, and mail within 7 days after last offloading date.

The following information (found on the Green Page) is mandatory for selected vessels and voluntary for all other vessels. For selected vessels, the following information must be mailed within 30 days after last offloading date.

- **Fuel**: Price per gallon paid for fuel used during trip. *(If you did not refuel for the trip, record price paid when fuel was last purchased.)*; indicate gallons actually **used** during the trip. *(Exclude fuel purchased but not used.)*
- **Bait**: Record total cost of bait purchased and amount of bait **used** during trip by count or pounds.
- **Light Sticks**: Record price per light stick and number of light sticks **used** during the trip *(If a light stick was re-used, only count it once.)*
- **Ice**: Indicate the price per unit, the number of units purchased, and the unit size of ice purchased.
- **Grocery expenses**: Indicate grocery costs.
- **Total Shared Costs**: Record the sum of all costs incurred for this trip that are subtracted from gross revenues prior to calculating crew share payments, **including** (*estimated*) shared gear, repair and maintenance costs. If vessel does not use crew shares, record zero.
- **Other Trip Costs**: Other costs incurred for this trip **excluding** items listed elsewhere on this trip summary form. For example, include docking/offloading fees (if separate from broker fee), crew travel/lodging, fishing supplies.
- **Crew Shares**: If you did not use crew share system on a trip, then calculate payments as percentage of (*estimated*) gross revenues.
  - **Owner** Crew Share: Percentage of net revenue (*gross revenue less total shared costs*) paid to owner.
  - **Captain** Share: Percentage of net revenue paid to captain.
  - **Crew Average** Share: Average percent share of net revenue paid to crew, excluding captain.
- **Broker/Dealer Selling Expense** or **Broker/Dealer Percentage**: Report either the (*estimated*) broker/dealer fee or the percentage (by gross revenue or weight of fish) charged by the broker. (*If catch is sold to multiple brokers/dealers, please report for broker/dealer handling majority of catch or report the average charged across brokers/dealers.)*
- **Captain License Number** and **State**: Record license number and issuing state.

APPENDIX 2. 2003 PELAGIC LOGBOOK-TRIP SUMMARY FORM

Use BLACK or BLUE Ink Only OMB 0648-0371 Exp. 06/30/2005

2003 ATLANTIC HIGHLY MIGRATORY SPECIES TRIP SUMMARY FORM

NMFS USE Only Received Date Schedule # 203000000

Vessel Name: _____

Vessel Number: _____

Contact Phone Number: (_____) _____-_____

Contact Name (Please Print): _____

I certify the information contained on this form is accurate and complete to the best of my knowledge:

Captain Signature: _____

Captain Name (Please Print): _____

Port & State of Departure: _____ [ ][ ]

Port & State of Landing: _____ [ ][ ]

Dealer Names:

_____ _____

_____ _____

_____ _____

	Month	Day	Year
Date of Departure	[ ][ ] /	[ ][ ] /	2003
Date of First Set	[ ][ ] /	[ ][ ] /	2003
Date of Last Set	[ ][ ] /	[ ][ ] /	2003
Date of Landing	[ ][ ] /	[ ][ ] /	2003
First Day Offload	[ ][ ] /	[ ][ ] /	2003

Number of Sets [ ][ ]

Number of Crew Members (excluding captain) [ ][ ]

State Trip Ticket #: _____

APPENDIX 3. 2003 PELAGIC LOGBOOK-TRIP EXPENSE & PAYMENT SUMMARY

TRIP EXPENSE & PAYMENT SUMMARY (Mandatory, if selected; otherwise voluntary)

		Unit Cost	Quantities Used
Fuel	Price per gallon $	$\square\square.\square\square$	Gallons used $\square\square\square\square\square$
Bait	Trip cost $	$\square\square\square.\square\square$	Pounds $\square\square\square\square\square$ and/or Count $\square\square\square\square\square$
Light Sticks	Price per stick $	$\square\square.\square\square$	Light Sticks used $\square\square\square\square\square$
Ice	Price per unit $	$\square\square.\square\square$	Quantity of Ice $\square\square\square\square\square$
			Unit of Ice: Tons? $\square$ Blocks? $\square$ Pounds? $\square$
Grocery Expenses			$ $\square\square\square\square.\square\square$
Total Shared Costs (Includes only those costs subtracted from gross revenues to calculate crew payments. See instructions.)			$ $\square\square\square\square.\square\square$
Other Trip Costs (Other costs incurred on this trip, excluding items listed elsewhere on this trip summary form. See instructions.)			$ $\square\square\square\square.\square\square$

Crew Shares		Percent Share
	Owner	$\square\square\square$ %
	Captain	$\square\square\square$ %
	Crew Average	$\square\square\square$ %

Broker/Selling Expense $ $\square\square\square\square$ OR Broker Percentage $\square\square$ %

By Revenue? $\square$ or By Weight? $\square$

Captain License Number: _____ State $\square\square$

APPENDIX 4. INSTRUCTIONS FOR PELAGIC LOGBOOK SET FORM

Please use a separate log sheet for each set. If using a gear that is not fished in sets, use one sheet for each day of fishing.

- Record the **Official Vessel Number.**
- **Signature,** each set form must be signed by the captain or a person responsible for maintaining the records for the vessel.
- Designate primary **Target** species.
- Record **Gear Used.**
- Record **Set Date** and **Haulback Date** (calendar day when set or haulback began).
- Enter Times when using longlines or gillnets for:
  - **Begin Set** and **End Set** (designate AM or PM)
  - **Begin Haulback** and **End Haulback** (designate AM or PM)

  (Please note, do not use military time).
- At the start of each set, record the location to the nearest degree and minutes of **Latitude** and **Longitude,** and the **Surface Water Temperature,** in degrees Fahrenheit.
- Enter the following data for each set if using **Longline** gear:
  - **Number of hooks per set**
  - **Number of hooks between floats**
  - **Number of light sticks**
  - **Length of Mainline** (in miles)
  - **Average Length of Gangions** (in fathoms)
  - **Average Length of Floatline** (in fathoms)
  - **Did you use a line thrower?**
  - **Were you tending or rebaiting hooks before haulback? If yes, specify how many hooks were rebaited.**
  - **Bait: indicate Live, Dead or Artificial.**
- Enter the following data for each set if using **Gillnet:**
  - **Mesh Size** (in inches)
  - **Total drift gillnet net length** (in fathoms)
  - **Fishing Depth Range** (Depth of top and of Bottom of net in fathoms)
- Record **NUMBERS OF SWORDFISH, TUNAS, SHARKS AND OTHER SPECIES KEPT AND THROWN BACK.** For the fish that were thrown back, please specify the number of those that were **Alive** and the number of those thrown back that were **Dead**. For **Est. Lbs Kept.,** write down the estimated dressed weight in pounds of fish kept for each species. For catches of species not listed on the form, print the species name in the blank spaces and record the appropriate catch information.
- Record **NUMBERS OF SEA TURTLES INVOLVED**
  - **Total Number Involved.** Write down the total number of each sea turtle species that were caught in, or interacted with, your fishing gear for the period of your report.
  - **Number Injured.** Write down the number of each sea turtle species that were injured while in, or by, your fishing gear.
  - **Number Dead.** Write down the number of each sea turtle species that were observed to be dead while in, or by, your fishing gear.

APPENDIX 5. PELAGIC LOGBOOK SET FORM

Official Vessel Number: | Signature. | 2003000000

I certify that the information contained on this form is accurate and complete to the best of my knowledge. | NMFS Use Only

TARGET: ○ Swordfish ○ Yellowfin ○ Bigeye ○ Mixed Tuna ○ Sharks ○ Dolphin ○ Other (list) _____

GEAR: ○ Pelagic Longline ○ Bottom Longline ○ Handline ○ Harpoon ○ Gillnet ○ Bandit ○ Rod & Reel ○ Otter Trawl ○ Squid Trawl ○ Other (list) _____

Set Date: __/__/2003 | Haulback Date: __/__/2003

__:__ ○am ○pm | __:__ ○am ○pm | __:__ ○am ○pm | __:__ ○am ○pm

__ __ Deg __ __ Min North | __ __ Deg __ __ Min West | __ __.__ °F

Please do not use decimals or ranges. Use whole numbers only.

No. of Hooks

No. of Hooks between Floats

No. of Light Sticks

Mainline Length (nm)

Average Gangion Length (fm)

Average Floatline Length (fm)

Use Line Thrower? ○Yes ○No

Were You Tending/Rebaiting hooks before haulback? ○Yes ○No

If yes, then - # of hooks rebaited:

Bait Used: ○Dead ○Live ○Artificial

Mesh size (in):

Total Net Length (fm)

Fishing Depth Range (fm): __ __ __ to __ __ __

	No. Kept	No. Thrown Back Alive	No. Thrown Back Dead	Est. Lbs. Kept		No. Kept	No. Thrown Back Alive	No. Thrown Back Dead	Est. Lbs Kept
Swordfish									
Bonito Tuna					Blue				
Bluefin Tuna					Mako, Longfin				
Skipjack Tuna					Mako, Shortfin				
Yellowfin Tuna					Oceanic Whitetip				
Blackfin Tuna					Porbeagle				
Albacore Tuna					Thresher, Bigeye				
Bigeye Tuna					Thresher, Common				
White Marlin					Bignose				
Blue Marlin					Blacktip				
Sailfish					Dusky				
Spearfish					Bonnethead				
Escolar					Hammerhead				
Dolphin (Mahi)					Night				
Wahoo					Sandbar				
King Mackerel					Sharpnose				
Greater Amberjack					Silky				
Banded Rudderfish					Spinner				
					Tiger				
					White				

	Involved	Injured	Dead		Involved	Injured	Dead
Leatherback				Kemp's Ridley			
Loggerhead				Hawksbill			
Green							

APPENDIX 6. NO FISHING REPORTING FORM

OMB 00648-0371 Exp 08/30/2005

Version Date 09/02

NMFS Use Only: Opened:	Schedule #

NO FISHING REPORTING FORM

Vessel ID. NO. ☐☐☐☐☐☐☐☐ Vessel Name: _____

During the entire month of ☐☐ , year ☐☐☐☐ this vessel DID NOT FISH in the fisheries checked below:

- more than one fishery may be checked
- DO NOT check any fishery if your vessel does not have a permit for it
- **Use Blackink**

○ Atlantic Highly Migratory Species (swordfish/tunas)

○ South Atlantic Snapper-Grouper

○ Gulf of Mexico Reef Fish

○ Shark

○ King Mackerel

○ Spanish Mackerel

Signature _____ Phone ( ) _____ - _____